CLAIMS

1. An electric potential measuring device, comprising:

an oscillating device which includes torsion springs, and an oscillating body axially supported by the torsion springs such that the oscillating body oscillates about the torsion springs; and

signal detecting means which is located on a surface of the oscillating body and includes at least one detection electrode,

wherein an output signal appearing on the detection electrode is detected by varying a distance between the detection electrode and a surface of an electric potential measuring object disposed facing the detection electrode by the oscillating device to vary a capacitance between the detection electrode and the surface of the electric potential measuring object.

2. The electric potential measuring device according to claim 1, wherein two detection electrodes are disposed at positions on both sides across a central axis about which the oscillating body oscillates, on the surface of the oscillating body, in order that output signals containing information of different phases and amplitudes appear on the detection electrodes.

3. The electric potential measuring device according to claim 2, wherein the signal detecting means performs a signal detection by use of a difference between the two output signals outputted from the detection electrodes.

4. The electric potential measuring device according to claim 1, wherein a surface of the oscillating body is one of a planar surface, a convex spherical surface, a convex cylindrical surface whose generating line is parallel to the oscillation central axis, and a roofshaped surface whose edge line is parallel to the oscillation central axis.

5. An image forming apparatus, comprising:

the electric potential measuring device according to claim 1; and

image forming means,

wherein a surface of the oscillating body of the electric potential measuring device is disposed facing a surface of an electric potential measuring object of the image forming means, and

wherein the image forming means controls an image forming process by using the signal detection result from the electric potential measuring device.

6. An electric potential measuring method, comprising the steps of:

placing an oscillating body having an electrode which oscillates about a shaft and an electric

potential measuring object such that the electrode faces the electric potential measuring object; and

measuring a surface electric potential of the electric potential measuring object based on a capacitance between the electric potential measuring object and the electrode, by oscillating the oscillating body.